AWIPS OB2 Release Notes

Section I - New Functionality in OB2

1.0 D2D/TEXT/OTHER APPLICATIONS

1.1 AWIPS Verification Program

! The Verification GUI can now be run on the Linux workstations, in addition to the HP workstations.

1.2 Climate/HWR

! HWR and Climate have been ported to LINUX.

1.3 Color Curves

! Two solutions have been implemented to address the accumulation of an unmanageable number of color curves at some sites. First, the "Save" and "Delete" buttons are now always enabled when a customizable color curve is loaded into the Image Colors Editor. Second , the color curve scheme has been enhanced to allow for multiple specialized cascading menus as follows.

Color curves are specified in the netCDF CDL file $FXA_DATA/colorMaps.mark. D2D and IGC executables access a netCDF file which is generated from this CDL during the -tables step of localization. The colorMaps.mark file has been enhanced to support a structure which categorizes curves into Grid, LAMP, Profiler, Radar, and Sat in addition to the usual office customized and user customized submenus. Radar is furthur broken down into MDL, OSF, and misc radar curves submenus, and Sat is furthur split into WV, VIS, IR, and misc Sat curves submenus. This submenu structure can be changed by modifying colorMaps.mark and re-running the -tables task of localization. A user can also specify a sub menu structure for his/her own personal curves or for the office customized curves by using colons when entering the name in the "Save As" or "Office Save As" dialogs that are invoked from the Image Colors Editor. The colon is used as a delimiter in the color table names to specify submenus. The *image.tcl* script now parses color table names with colons to build submenus.

For example, create a new color curve and save it in Office Save As as test:Sat:purple. This creates a new menu item in the color curves menu as follows. In the Office Save As menu, there is now a test cascading menu. In the test menu there is now a Sat cascading menu. The Sat submenu now contains the color curve called purple. Curve names will appear on D2D user interfaces (Image Properties and Image Colors Editor dialogs) without the submenu structure. For example, even though "test:Sat:purple" is stored in the netCDF file, it will appear to the user as "purple". **(DR 11828)**

1.4 GOES High Density Winds

! GOES High Density Wind data are now available. Data processing and storage are performed by the new *BufrDriver hdw* process (the child of the *DataController COMMS_ROUTER BufrDriverCont5* process) on PX2. Displays are available from the GOES High Density Winds submenu in the Satellite menu. Plots are stratified by reference dataset (e.g., IR, WV, vis, 7 micron sounder) and by level (200mb, 300mb, etc.).

1.5 Local Analysis and Prediction System (LAPS)

! Uses PIREPS data.

! Uses new static land use data sets.

1.6 Local Storm Report (LSR)

! It is now possible to enter a location by its latitude and longitude on the Create/Edit page.

! Events that have been related to a saved LSR can now be deleted.

! The new official LSR format has been incorporated, but is still being held by a date file to be automatically activated when the new format goes into effect in 2005. **(DR 12089)**

! A number of new and enhanced event types have been incorporated into LSR.

! For QC purposes, when entering remarks, tab, end-of-line, and double space characters are no longer allowed. Word wrapping has also been enhanced.

1.7 Radar

! A new high-resolution mesocylone graphic (Mesocyclone Rapid Update [MRU]) is available, with updates after each tilt is processed. An accompanying text product is stored as WSRMRUxxx. This product will be produced by the ORPG starting in Build 4.

! The high-res SRM introduced in OB1 is easier to use with a new GUI for selecting the storm motion vector. This GUI is added to the Radar Display Controls, formerly known as the Radar Graphics Controls.

! New/improved products from the ORPG include an enhanced Echo Tops product, improved hodograph display, a high-res VIL, and Digital Storm Total.

1.8 System for Convection Analysis and Nowcasting (SCAN) and Flash Flood Monitoring Program (FFMP)

! The SCAN Storm Cell Table now has a toggle with which the user can exclude the storm cells identified outside the site's CWA from alarm consideration and listing in the Cell Table.

! The SCAN 0-3 Hour Rainfall and Lightning probability products are now available. Displays are available from the 0-3 Hour Radar-based QPF menu in the Other section of the NCEP/Hydro menu.

! The FFG Mosaic available in the SCAN menu under FFMP now shows all of the FFG that FFMP is using, including any forced FFG values the user may have defined using the forcedFFG command line application.

! Virtual Gage Basins have been implemented. This means that the radar bins that "contain" various rain gages are treated as basins and have precipitation accumulation data calculated and saved. With this data, you can compare the rain gage with the Virtual Gage Basin in a time trend and in the Basin Table. The Virtual Gage Basins are not included in monitoring or in the image display in the D2D.

! The user can now select "QPF" as a precipitation source in the Basin Table. When QPF is selected, the 1-hour categorical QPF generated by SCAN is used to compare to FFG.

! The Basin Trend now has additional right side labels.

1.9 Text Workstation

! Products larger than 80,000 characters are no longer truncated when read in a text window. The memory allocation scheme has been modified so that there is no longer a limit to the number of characters a text product can have to be fully displayed in a text window. From the beginning, textDB was designed to use static buffer allocation to read products from the fxatext database. By using this memory allocation scheme, the size of the buffer had to be declared in advance so that the compiler allocated the buffer beforehand. The buffer size set the maximum number of product records for allocation to 1000, and the maximum size for a product record to 80,000 bytes. If a text product exceeded the pre-declared buffer size, it was truncated down to 80,000 bytes, which is what often occurred with the SPC STADTS product. The fix implemented in OB2 was to change the memory allocation scheme from static buffer allocation to dynamic buffer allocation. In this scheme, the memory is allocated dynamically when needed and with the exact size needed for the given product. This flexible, on-demand memory allocation scheme utilizes memory more efficiently, and is worry free for potential large-sized

products. It also allows for display of more than 1000 product records at a time. **(DRs 12065, 12294)**

1.10 Volume Browser/Grid Products

! Data from the Eastern North Pacific Regional Wave Watch III model are now available.

! The Global, Western North Atlantic, and Alaska wave model grids now extend to 168 hours.

1.11 Warning Generation (WarnGen)

! The format of products from WarnGen is now automatically checked for the following items:

1. proper UGC and VTEC codes
2. UGC line matching text counties, zones, etc.
3. internally consistent times
4. product type matching the Mass News Disseminator (MND) section and text in the first bullet
5. correct contents and format of the MND and the first three bullets
6. $$ at the end of the product.

! Support for follow-up statements (county SVS, FFS, MWS) is now provided. When selected, the user may choose a current warning by clicking mouse button 3 on the display or from a list, and D2D will display the original box, an estimate of the current centroid based on the pathcast, and the remaining portion of the track. After optionally modifying the location and track (the box is not editable), draft text is generated as usual. WarnGen also now includes a cancellation option.

! It is now possible to issue a follow-up warning (SVR, TOR, FFW, or SMW), with WarnGen initialized based on a current or recent warning, but with storm location updated based on the track and current time.

! The combined FFW/SVR product is now supported.

2.0 INTERACTIVE FORECAST PREPARATION SYSTEM (IFPS)/WATCH WARNING ADVISORY(WWA)

! WWA is now self-contained. Everything happens on the monitor on which the WWA session is launched. The created text products no longer pop up on the text workstation. Rather, all text product work is done in the WWA session, using new menu items to edit

the header and body of the text. Products are disseminated directly from the WWA client using the *handleOUP.pl* script.

! Test and Practice modes are now available within WWA.

! WWA now has full VTEC functionality.

! There is a new WWA Admin GUI that consolidates and enhances WWA administration functions. The GUI can be launched from the command line by running ***/awips/adapt/ifps/bin/linux/WWAAdmin.sh***.

! WWA now provides the capability to produce replace/upgrade/downgrade products.

! The HWO and SPS products have been changed from non-segmented to segmented type products. **(DR 11911)**

3.0 HYDROLOGY

3.1 General

! Data retention in the database can be controlled based upon a station's status as primary responsibility or for backing up another office.

3.2 HydroMap/Multisensor Precipitation Estimate (MPE)

! HydroMap/MPE can display stage data as flow and flow data as stage using the rating curve.

3.3 RFC Archiver

! Data from metars and shef data from the WAN can be made available for the RFC archiver.

3.4 RiverPro

! RiverPro can consider Action stage in addition to flood category stage for recommending a product.

! RiverPro can be set up to recommend a product for all points in a group when only one point meets flood criteria.

! RiverPro can create products with forecast trend phrases.

4.0 SYSTEM

4.1 caseArchiver

! The caseArchiveServer process has been removed from DS1, as the ability to archive radar data is now performed by the Archive (AX). All menu options for radar archive have been removed from D2D.

4.2 Freeware/COTS Software

! Python MegaWidgets is upgraded to version 1.1 on HP and Linux**.**

! BWidget version 1.4.1 is installed on Linux.

4.3 Localization

! Shared localization has been implemented between the HP and Linux devices. The Linux machines now use the shared /data/fxa/nationalData directory instead of a nationalData directory local to each Linux device. Previously, some shape files were only readable on Linux or HP, so those files needed to be created separately and localization needed to be run separately on the Linux and HP machines. With shared localization, there is now one nationalData directory shared between all machines, and thus a localization run on one machine can now be transferred to any other machine. Thus, localizations can now be run on the faster Linux workstations and the files then safely transferred to the HP workstations. This will also help speed up major installations, as the localization will be run on a Linux workstation instead of an HP device. Note: ipc.config has been moved from /data/fxa/nationalData to /awips/fxa/data since it still needs to be different on the PXs.

4.4 MDCRS Profiles

! The frequency of processing of MDCRS profiles (acarsProfiles) has been increased to every 10 minutes from the previous 30 minute interval. Processing has also been moved from AS1 to PX2. The script that initiates this processing is *startAcarsProfiles.sh* found in the ingest.crontab.px2. **(DR 11912)**

4.5 Radar Archive

! The Radar Archive application has been removed in OB2. Radar data can be archived using the Archive Server (AX).

5.0 OCONUS

! Remote Automatic Meteorological Observing System (RAMOS) data are now available. A RAMOS-to-METAR translator has been added at OCONUS sites to allow RAMOS-format reports to be stored in the METAR dataset. Data processing and storage are performed by the new *RamosDriver* process (a child of the *DataController COMMS_ROUTER TextCont.config* process) on AS1. RAMOS observations are displayed along with the regular METAR observations using the METAR plot product from the Surface menu.

! Lightning data are now available at OCONUS sites. Data processing and storage are performed by the new *lightningDecoder* process (a child of the *DataController COMMS_ROUTER TextCont3.config* process) on DS1. The new data are displayable from the Text Lightning submenu of the Maritime menu in the Obs menu.